

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1.-10. (Cancelled)

Claim 11. (New) A hybrid vehicle comprising:

an internal combustion engine for driving said vehicle;

a battery for storing and discharging electric power;

an electric rotary machine mechanically connected with a crankshaft of said internal combustion engine;

an inverter for controlling driving of, and electric power generation by, said electric rotary machine; and

a controller for controlling said inverter; wherein,

said electric rotary machine, uses electric power supplied from said battery to start said internal combustion engine, and uses a rotative force transmitted from said internal combustion engine to generate electric power to charge said battery;

said electric rotary machine comprises a stator having a winding, and a rotor assembly disposed rotatively relative to said stator, with a clearance therebetween; wherein,

said rotor assembly comprises two portions which are divided in an axial direction, including a first rotor fixed on a shaft, and a second rotor fitted rotatably on said shaft;

each of said first and second rotors has field magnet means for generating a magnetic flux, with magnetic poles of said field magnet means arranged with alternating polarity in a direction of rotation of said rotor assembly;

said second rotor includes a mechanism for varying a rotational angular position of a center of a magnetic pole of said field magnet means on said second rotor relative to a center of a corresponding magnetic pole of said field magnet means on said first rotor, depending on a resultant balance of forces due to magnetic interaction between said field magnet means on said first rotor and said field magnet means on said second rotor and due to a working direction of torque applied to said rotor;

said mechanism includes,

at least one first valley portion, which is set radially inward, and at least one first tooth portion, which projects radially outward, provided on the inner-circumference of said second rotor;

at least one second valley portion, and at least one second tooth portion provided on an outer-circumference of said shaft, with at least one of said at least one second tooth portion engaging with said at least one first valley portion and said at least one first tooth portion; and

a spring, and a damper provided between said at least one first tooth portion and said at least one second tooth portion; and

a width of said at least one second valley portion is greater than a width of said at least one first tooth portion, so that said second rotor is able to rotate to a predetermined angular displacement relative to said first rotor.

Claim 12. (New) A hybrid drive type vehicle as set forth in Claim 11, wherein:

when said electric rotary machine is in a low speed rotation state, the angular position of the center of said magnetic pole of said field magnet means on said second rotor is aligned with the center of said magnetic pole of said field magnet means on said first rotor, depending on a resultant balance of forces due to magnetic interaction between said field magnet means on said first rotor and said field magnet means on said second rotor and due to a working

direction of the torque applied to said rotor to cause said electric rotary machine to function as a motor; and

when said electric rotary machine is in a high speed rotation state, the angular position of the center of said magnetic pole of said field magnet means on said second rotor is displaced relative to the center of said magnetic pole of said field magnet means on said first rotor when the working direction of the torque applied to said rotor is opposite to a last working direction, to cause said electric rotary machine to function as a generator.

Claim 13. (New) An electric rotary machine comprising:

a stator being a winding; and

a rotor assembly disposed rotatively relative to said stator, with a clearance therebetween; wherein,

said rotor assembly comprises two portions which are divided in an axial direction, including a first rotor fixed on a shaft, and a second rotor fitted rotatably on said shaft;

each of said first and second rotors has field magnet means for generating a magnetic flux, with magnetic poles of said field magnet means arranged with alternating polarity in a direction of rotation of said rotor assembly;

said second rotor includes a mechanism for varying a rotational angular position of a center of a magnetic pole of said field magnet means on said second rotor relative to a center of a corresponding magnetic pole of said field magnet means on said first rotor, depending on a resultant balance of forces due to magnetic interaction between said field magnet means on said first rotor and said field magnet means on said second rotor and due to a working direction of torque applied to said rotor;

said mechanism includes,

at least one first valley portion, which is set radially inward, and at least one first tooth portion, which projects radially outward, provided on the inner-circumference of said second rotor;

at least one second valley portion, and at least one second tooth portion provided on an outer-circumference of said shaft, with at least one of said at least one second tooth portion engaging with said at least one first valley portion and said at least one first tooth portion; and

a spring, and a damper provided between said at least one first tooth portion and said at least one second tooth portion; and

a width of said at least one second valley portion is greater than a width of said at least one first tooth portion, so that said second rotor is able to rotate to a predetermined angular displacement relative to said first rotor.